A NEW MEXICAN ASHMUNELLA

BY H. A. PILSBRY

ASHMUNELLA CARLSBADENSIS, new species.

A cave in Dark Canyon, southwest of Carlsbad, New Mexico. Type 158815, paratypes 158816 ANSP., also in coll. M. C. Z., collected by Mr. E. B. Howard, 4.30.32, from the surface to a depth of two feet.

The shell is umbilicate, the umbilicus contained about 5½ times in diameter of shell; lens shaped, acutely carinate; cinnamon-buff, with little gloss above, the base paler, glossy, subtransparent. Initial 1½ whorls smooth, third whorl with a few weak traces of long granules on the weak striae, last whorl with weak wrinkles of growth and some very weak spiral lines. The fully 5 whorls are moderately convex, the last descending in front. The umbilicus enlarges suddenly in the last whorl, the inner, well-like cavity being much less than half of the final width. The very strongly oblique aperture is irregularly trapezoidal, the white lip reflected, with one tapering, round-topped tooth within the outer margin, two smaller teeth in the basal margin, and a short, straight, oblique tooth on the parietal wall.

Height 5.5 mm., diam. 13 mm.

This species is related to *A. walkeri* Ferriss, of the Florida Mountains, New Mexico, but it differs by the much narrower peristome, with a narrower, tapering tooth in the outer lip, further from the outer basal tooth; a much smaller parietal tooth, a thinner parietal callus, and there is a fraction of a whorl more. Like *A. walkeri* it appears to be a burrowing snail.

VALVATA SIMPLEX GOULD

BY WILLIAM HENRY FLUCK

Among some mollusks collected by the writer in Oneida Lake, N. Y., June 30, 1930, were some *Valvata* different from any I had in my collection. They have fairly rounded and smooth whorls, and exist in vast numbers on the algae and other water weed in the eastern end of the lake, and, no doubt, throughout the whole lake in suitable stations, al-

though F. C. Baker, in his work on Oneida Lake, 1916 and 1918, does not mention this form. He did, however, collect the very strongly carinate form known as *V. tricarinata* Say, as well as *V. bicarinata normalis* Walker and *V. sincera* Say. I sent a few of these Oneida Lake *Valvata* to Dr. Pilsbry for expert diagnosis, and Mr. Vanatta, who looked into the matter, reported as follows: About 20 specimens, no keels, *Valvata simplex* Gould; two specimens, no peripheral keel, *Valvata tricarinata confusa* Walker; two specimens with peripheral keel only, *Valvata tricarinata*, var. not named.

I very carefully examined a vial of these Oneida Lake *Valvata* in my own collection, using a 20 power simple lens, inspecting 326 specimens, in all, and I find they vary from perfectly smooth, rounded forms through all gradations to fairly well carinated specimens. Out of the whole lot of 326, I was able to pick out the following:

1. There were 236 whose rounded whorls showed no trace of actual shoulder, but in some specimens a lighter coloring seemed to show where the shoulder should have been, but neither real carina nor actual shoulder was present. This mollusk is the one called *Valvata tricarinata simplex* Gould.

2. This lot, 51 specimens in all, were similar to the first, except that the base of the shell, where it dips into umbilicus is distinctly angulate or keeled, but not so much as is the case with typical *Valvata tricarinata*. This, apparently, is what is called *Valvata tricarinata infracarinata* Vanatta.

3. A lot of 16 specimens, having a distinctly angulate base, and in addition, with a more or less distinct angulate periphery or a carina, but the upper carina missing. I have not found this form in the literature available to me, but this mutation is, no doubt common enough, and if it has not been called attention to, I should like to suggest that it be called variety *bakeri*, after F. C. Baker. Type No. 169016 ANSP.

4. The next lot, 11 in number, has the angular shoulder above and the basal angle also, but not very outstandingly so, while the periphery is rounded. This is probably what Mr. Vanatta marked *V. t. confusa* Walker, but if it is that form,

it is a little sister to the big specimens I have from the Delaware River at Philadelphia, collected thirty years ago. It is, however, in all likelihood, what Dr. Walker now calls *V. t. perconfusa.*

5. This lot consists of 6 specimens, all of which have, more or less triangular whorls, with discernable shoulders, tending toward carinae, but which I should not consider sufficiently carinate to regard as typical *Valvata tricarinata,* although they form a slight approach toward that species.

6. Four forms out of the whole lot of 326 shells have the three keels so distinct that I will tack up their shingle, with some reserve, as *Valvata tricarinata* (Say), but even these have not the outstanding keels so unfailingly distinct and prominent as I note in hundreds of specimens I have from the Monacacy Creek, at Bethlehem, Pa.

7. Last, a lot of two specimens showing a peripheral shoulder only, indicating where the keel ought to be. This is near to what Mr. Vanatta indicated as an unnamed variety. I take it to be what Baker, 1928, calls *mediocarinata.*

This round-whorled race of Valvata from Oneida Lake is so different from the strongly carinate species that bears the name of *Valvata tricarinata* with its depressed whorls, high carinae like ramparts about a tower, and with flat, squarish trenches between the carinae, that I rather regret that *simplex* is regarded as a variety of *tricarinata,* rather than as a distinct species. The proportion of specimens in this Oneida Lake form of *simplex* that runs to angles and carinae is so small, and the number developing into keels so insignificant, that the prepondering forms having rounded whorls should be regarded as a distinct species bearing the name *Valvata simplex* Gould. The varieties indicated above, could as well be regarded as mutations of *simplex* as of *tricarinata,* and, as I think, with more exactness.

There is no doubt, however about *Valvata tricarinata* Say being found in Oneida Lake. Baker reports it in his work on Oneida Lake, and the present writer found 6 specimens of this species, about which there can be no question, on July 6, 1930. I found no other form of Valvata with them. It is

therefore quite possible that hybridizing goes on between typical *simplex* and typical *tricarinata,* so that all possible mutations or forms or varieties are to be found. I, for one, will regard *Valvata simplex* Gould as a species, variable, of course, as all species are more or less variable, even as the human race is variable. For, if naturalists were to "subspeciesize" the human race as friend Baker has the fresh water mollusca of his tramping ground, we would have not only Homo sapiens auct., but also Homo sapiens villosus and Homo sapiens calvescens, according to whether we are football players or belong with bald heads in the front row.

SOME HABITS OF A CUBAN SNAIL, POLYMITA PICTA BORN

BY E. A. ANDREWS
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Some 54 individuals of the "painted snail" only one to one and a half centimeters in diameter and immature, brought from Cuba by Mr. d'Alte Welch, were kept in a deep glass jar of six liters capacity and with both flat and curved sides, covered but ventilated, kept moist by wet paper toweling, from May to October, 1931, with attempts to feed them upon various fruits and vegetables as well as wood green with pleurococcus, yeast smears, honey, mixtures of precipitated chalk glucose and dextrine, as well as fragments of Florida oolite for source of lime.

Faeces showed no pleurococcus but some other green cells as well as towel paper fibers cut short but not digested, with also some rotifers, ciliata and many nemas, and occasional denticles from the lingual ribbon.

Mortality was great; some contained parasites, others apparently received too scanty food: only five survived into October. However, observations from July 9th to September 6th showed that under the above conditions these snails had certain marked habits both in the jar and also when placed upon trees in the grounds, in Baltimore, Md. The